

In the Claims:

What is claimed is:

1. Cancelled.
2. Cancelled.
3. (Currently amended) The compound
 (1*R*)-(3-Benzenesulfonylcyclohepta-2,4-dienyloxy)-trimethylsilane;
 (1*R*, 2*R*, 3*R*)-3-Benzenesulfonyl-2-methyl-5-phenylsulfanylcyclohept-4-enol;
 (1*R*, 2*R*)-(3-Benzenesulfonyl-2-methyl-5-phenylsulfanylcyclohept-4-enyloxy)-trimethylsilane;
 (1*R*, 2*S*)-3-Benzenesulfonyl-2-methyl-5-phenylsulfanylcyclohept-4-enyloxy)-*tert*-
 butyldimethylsilane;
 (1*R*, 2*S*)-2-Methyl-5-phenylsulfanylcyclohepta-3, 5-dienol;
 (1*R*, 2*R*)-*tert*-Butyldimethyl-(2-methyl-5-phenylsulfanylcyclohepta-3,5-dienyloxy)-silane;
 (1*S*, 2*S*, 7*S*)-2,7-Dimethyl-4-phenylsulfanylcyclohepta-3,5-dienol;
 (1*S*, 2*S*, 7*S*)-4-Benzenesulfonyl-2,7-dimethylcyclohepta-3,5-dienol;
 (1*S*, 2*S*, 7*S*)-(4-Benzenesulfonyl-2,7-dimethylcyclohepta-3,5-dienyloxy)-*tert*-butyldimethylsilane;
 (1*S*, 2*R*, 7*S*)-2-Dimethylaminomethyl-7-methyl-4-phenylsulfanylcyclohepta-3,5-dienol;
 (1*S*, 2*S*, 3*R*, 4*R*, 5*S*)-7-Benzenesulfonyl-3,5-dimethylcyclohept-6-ene-1,2,4-triol;
 (1*S*, 2*S*, 5*S*, 6*R*, 7*S*)-3-Benzenesulfonyl-6-(*tert*-butyldimethylsilanyloxy)-5,7-dimethylcyclohept-3-
 ene-1,2-diol;
 (1*S*, 2*S*, 3*R*)-Acetic acid 3-benzenesulfonyl-2-methyl-5-oxocycloheptylester;
 (1*E*, 3*Z*, 5*R*, 6*S*)-2-(*tert*-Butyldimethylsilanyloxy)-5-methyl-6-triisopropylsilanyloxycyclohepta-
 1,3-diene;
 1*R*, 2*R*, 3*R*, 4*S*, 6*S*)-7-(*tert*-Butyldimethylsilanyloxy)-2,3-dihydroxy-4-methyl-5-
 triisopropylsilanyloxycycloheptanone;
 (1*R*, 2*R*, 3*R*, 4*S*, 6*S*)-7-(*tert*-Butyldimethylsilanyloxy)-2-hydroxy-3-methoxy-4-methyl-5-
 triisopropylsilanyloxycycloheptanone;
 (2*S*, 4*S*, 5*R*, 6*R*)-2-(*tert*-Butyldimethylsilanyloxy)-6-methoxy-5-methyl-7-oxo-4-triis-
 propylsilanyloxyheptanoic acid methyl ester;

Amendment/Response After Final
 S.N. 10/662,781
 P27-053.amendment September, 2008

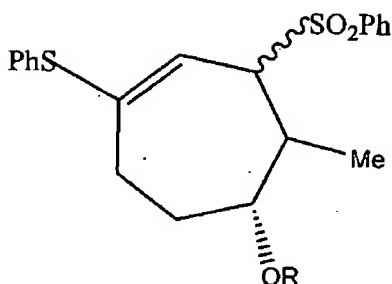
-2-

(1*R*,5*S*,6*R*,7*S*)-3-Benzenesulfonyl-6-(*tert*-butyldimethylsilyloxy)-5,7-dimethylcyclohept-3-enol;
(1*S*,5*S*,6*R*,7*S*)-3-Benzenesulfonyl-6-(*tert*-butyldimethylsilyloxy)-5,7-dimethylcyclohept-2-enol;
(1*S*,5*S*,6*R*,7*S*)-3-Benzenesulfonyl-6-(*tert*-butyl-dimethylsilyloxy)-5,7-dimethylcyclohept-3-enol;
(1*S*,4*S*,5*R*,6*R*,7*S*)-2-Benzenesulfonyl-5,7-bis-(*tert*-butyldimethylsilyloxy)-4,6-dimethylcyclohept-2-enol;
(3*S*,4*R*,5*R*,6*S*,7*S*)-1-Benzenesulfonyl-4,6-bis-(*tert*-butyldimethylsilyloxy)-7-methoxy-3,5-dimethylcycloheptene;
(2*S*,3*S*,4*R*,5*S*,6*R*)-3,5-Bis-(*tert*-butyldimethylsilyloxy)-2-methoxy-4,6-dimethyl-7-oxoheptanoic acid methyl ester;
~~(1*S*,4*S*)-3-Benzenesulfonyl-4-methylcyclohept-2-enol;~~
(3*S*,7*S*)-1-Benzenesulfonyl-3-methoxy-7-methylcycloheptene; or
(*S*)-4-Methylcyclohept-2-enone.

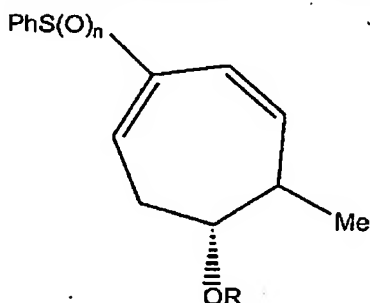
4. (Previously presented) A compound of claim 12, wherein the compound is produced by oxidation of dienylsulfides through addition of an oxidizing agent.
5. (Previously presented) A compound of claim 12, wherein the compound is made by a process in which reaction of allyl sulfones with TMS triflate and an amine in a solvent at reflux effects regiospecific elimination to yield dienylsulfides; the dienylsulfides are oxidized through addition of an oxidizing agent; and wherein the entire process optionally can be performed in a single pot.
6. (Currently amended) A compound of claim 12, wherein the compound is made by:
- (a) reacting allyl sulfones of the formula

Amendment/Response After Final
S.N. 10/662,781
P27-053.amendment September, 2008

-3-

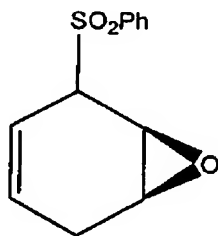


with TMS triflate and an amine in a solvent, at reflux to yield a dienyldisulfide of the formula



and oxidizing the dienyldisulfide with an oxidizing agent where R is C₁-C₅ alkyl, phenyl, substituted phenyl wherein the substituted phenyl group is substituted in one instance at the ortho, meta or para position of the phenyl group with a C₁-C₄ alkyl group, a halogen (F, Cl, Br, I) a nitro group, an amine, hydroxyl, a C₁-C₄ alkyl ester, a C₁-C₄ alkylether or acyl group, vinyl, alkynyl, trimethylsilyl or t-butyldimethylsilyl.

7. (Previously presented) A compound of claim 12, wherein the compound is made by alkylating an epoxyvinylsulfone of the formula

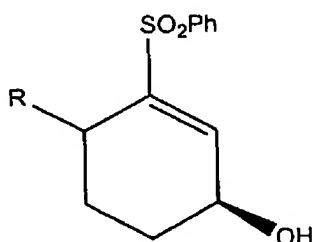


in a reaction medium comprising (R)₂CuLi and a solvent, where R is a C₁ to C₅ alkyl and wherein the reaction optionally can be performed in a single pot.

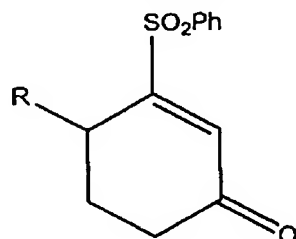
Amendment/Response After Final
S.N. 10/662,781
P27-053.amendment September, 2008

-4-

8. (Currently amended) A compound of claim 12, wherein the compound is made by oxidizing an allylic alcohol of the formula



where R is a C₁ to C₅ alkyl, phenyl, substituted phenyl wherein the substituted phenyl group is substituted in one instance at the ortho, meta or para position of the phenyl group with a C₁-C₄ alkyl group, a halogen (F, Cl, Br, I) a nitro group, an amine, hydroxyl, a C₁-C₄ alkyl ester, a C₁-C₄ alkylether or acyl group, vinyl, alkynyl, trimethylsilyl or t-butyldimethylsilyl to yield a β-sulfonyl enone of the formula



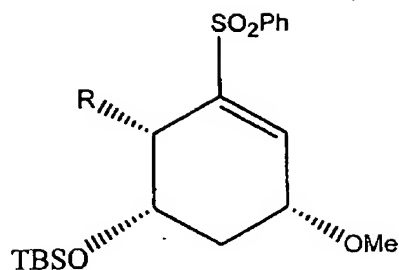
wherein the β-sulfonyl enone is subjected to Michael addition of heterocuprates and subsequent β-elimination of sulfinate, and

wherein the reactions optionally are performed in a single pot.

9. (Currently amended) A compound of claim 12, wherein the compound is made by reacting a sulfone of the formula

Amendment/Response After Final
S.N. 10/662,781
P274053.amendment September, 2008

-5-



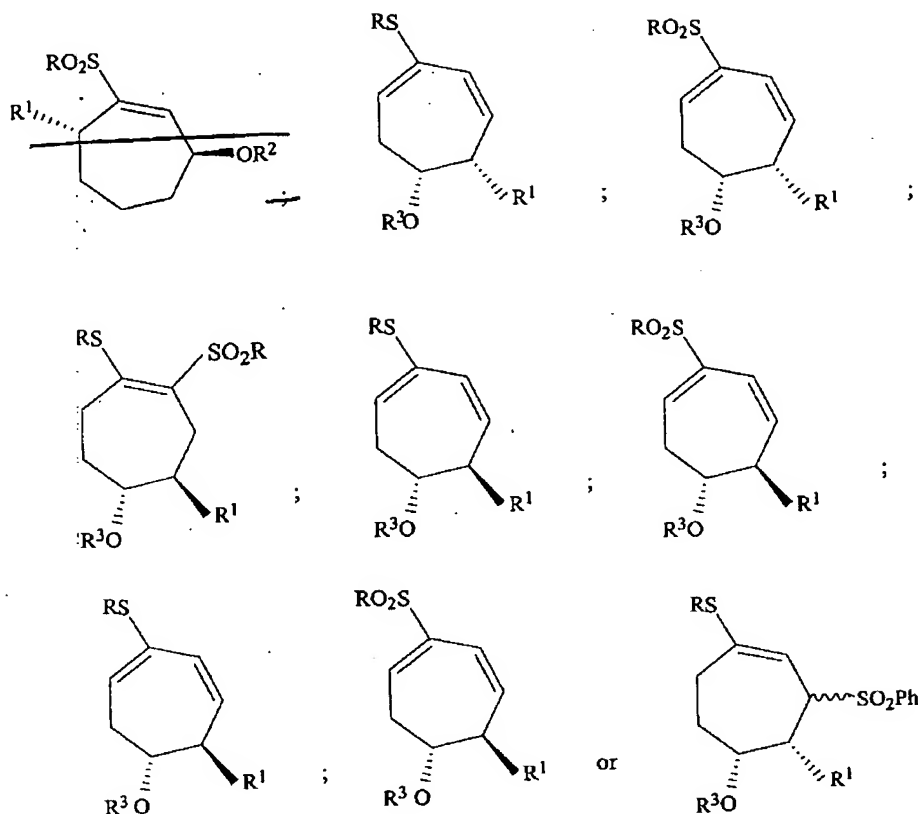
where R is a C₁ to C₅ alkyl, phenyl, substituted phenyl wherein the substituted phenyl group is substituted in one instance at the ortho, meta or para position of the phenyl group with a C₁-C₄ alkyl group, a halogen (F, Cl, Br, I) a nitro group, an amine, hydroxyl, a C₁-C₄ alkyl ester, a C₁-C₄ alkylether or acyl group, vinyl, alkynyl, trimethylsilyl or t-butyldimethylsilyl with one or more alkyl halides.

10-11. Cancelled.

12. (Currently amended) A compound selected from compounds of the formulae:

Amendment/Response After Final
S.N. 10/662,781
P27-053.amendment September, 2008

-6-



wherein:

R^1 is a C_1 - C_5 alkyl group;

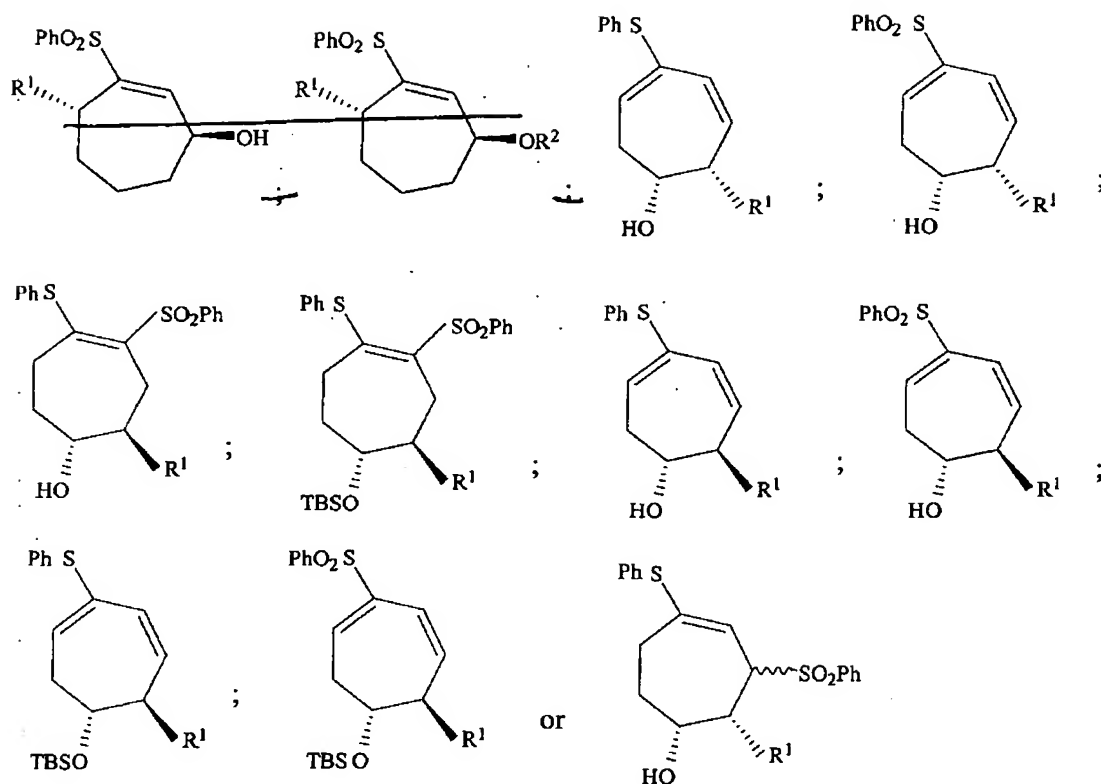
R^2 and R^3 are independently selected from H, a C_1 - C_4 alkyl group, or a trimethyl silyl group or a tertiarybutyl dimethyl silyl group ~~blocking group~~; and

R is a phenyl or substituted phenyl group wherein the substituted phenyl group is substituted in one instance at the ortho, meta or para position of the phenyl group with a C_1 - C_4 alkyl group, a halogen (F, Cl, Br, I) a nitro group, an amine, hydroxyl, a C_1 - C_4 alkyl ester, a C_1 - C_4 alkylether or acyl group, and stereoisomers thereof.

13. (Currently amended) A compound of claim 12, wherein the compound is selected from compounds of the formulae:

Amendment/Response After Final
S.N. 10/662,781
P27-053.amendment September, 2008

-7-



and stereoisomers thereof.

14. (Previously presented) A compound according to claim 5 wherein said amine is an organic amine.
15. (Previously presented) The compound according to claim 5 wherein said amine is triethylamine and said solvent is methylene chloride.
16. (Previously presented) The compound according to claim 5 wherein said oxidizing agent is a peroxide oxidizing agent.
17. (Previously presented) The compound according to claim 16 wherein said oxidizing agent is

Amendment/Response After Final
S.N. 10/662,781
P27-053.amendment September, 2008

-8-

meta-chloroperbenzoic acid (*m*CPBA).

18. (Previously presented) The compound according to claim 6 wherein said amine is triethylamine and said solvent is methylene chloride.

19. (Previously presented) The compound according to claim 6 wherein said oxidizing agent is meta-chloroperbenzoic acid (*m*CPBA).

20. (Previously presented) The compound according to claim 18 wherein said oxidizing agent is meta-chloroperbenzoic acid (*m*CPBA).

21. (Previously presented) The compound according to claim 7 wherein said solvent is an ether solvent selected from the group consisting of tetrahydrofuran (THF), diethylether (ET₂O) and mixtures thereof.

22. (Currently amended) The compound according to claim 12 wherein ~~said blocking group is~~ R² and R³ are each independently a trimethyl silyl group or a tertiarybutyl dimethyl silyl group.

23. (Currently amended) The compound according to claim 22 wherein ~~said blocking group is~~ R² and R³ are each a trimethyl silyl group.

24. (Currently amended) The compound according to claim 22 wherein ~~said blocking group is~~ R² and R³ are each a tertiarybutyl dimethyl silyl group.

Amendment/Response After Final
S.N. 10/662,781
P27-053.amendment September, 2008

-9-